Record Keeping Responsibilities

The Division requires monthly electronic reporting of water diversions and use. The water rights reporting system requires separate reporting for each water right. If one point of diversion supplies water for multiple water rights, the quantity diverted will have to be split up among the various water right holders for reporting purposes. All measurement notes, rating curves, calculations, and data logs should be retained for 10 years and copies made available to the Division when requested.

Manual log books – Record keeping by hand is best suited when there is easy access to the flow measuring device. Flowmeter records and reservoir levels can simply be recorded on forms or in a log book. For reservoirs, the frequency of record keeping will depend on variations in flow rates in and out of the reservoir.

Totalizers – Many flowmeters have the capability of measuring cumulative flow over time with a *totalizer*. In-line flowmeters display the current flow at any given point in time. With a totalizer, frequency of data logging is significantly reduced.

Remote data loggers – are the least expensive of the data logging options and are ideal for recording water level changes in canals and reservoirs over time. Water levels are recorded at pre-set intervals of time with a pressure transducer or other device that measures change in water levels. The device can be mounted along the side wall of a canal, stream channel or reservoir. Data is collected at scheduled intervals and can be downloaded manually to a mobile device such as a laptop during visits to the site. They are suitable in back-country or other remote areas with limited site access.

Water Pressure Transducer

Telemetric data loggers – Work like remote data loggers except the data is transmitted over the cellular phone network with access from the internet where you can retrieve flow rate or stage measurements at any time. There is a monthly cost to transmit data over the cellular network to your computer. Telemetric data loggers offer the convenience of not having to visit the site to retrieve the water level data and are most useful for reservoirs operating with frequent changes in inflow/outflow, and for recording fluctuations in river levels and canals.

Satellite data loggers – Celestial systems are used in remote areas where there is no available internet or phone service and are the most expensive of the data loggers due to the fact there is an on-going monthly fee to use the satellite network to download and review data on your computer. Satellite loggers work similar to remote data loggers except the data is transmitted via the satellite network to the internet where you can retrieve flow rate or stage measurements at any time.

Unit Conversions

1 Cubic Foot of Water =

7.4805 gallons or
62.37 pounds

1 Cubic Foot per Second (CFS) =

448.83 gallons per minute or
26,930 gallons per hour or
646,315 gallons per day

1 Cubic Foot per Second (CFS) =

1.9835 AF per day or
59.505 AF per 30 days or
723.9775 AF per year or

1 Acre-Foot (AF) =

enough water to cover 1 acre
of land one foot deep

1 Acre-Foot =

43,560 cubic feet or
325,850 gallons

1 Cubic Meter per Second =

35.31 CFS or
15,850 gallons per minute

1 Million Gallons =

3.0689 acre-feet

1 Million Gallons Per Day =

1,120.147 acre-feet per year

For additional conversions link to the online conversion calculator